REMARKS

Applicants appreciate the non-final Office Action of April 28, 2006, and the withdrawal of the Examiner's claim rejections based on Sato. The present Office Action has been carefully considered, and certain of the claims have been amended to improve their clarity. New claims 18-24 are also presented to more fully protect that which Applicants regard as their invention. As will be discussed in detail below, none of the art of record, even if combined, shows or suggests the invention defined by the claims now under consideration.

All of the claims (1-17), including independent claims 1, 8 and 15 stand rejected under 35 U.S.C. §102 as being fully anticipated by the patent to Okubo (US 5,948,036). This rejection is believed to be in error and is respectfully traversed. The ABS control method control method disclosed in Okubo teaches the narrow concept of maintaining the control period (T_{set}) constant for ABS brake pulsing. Pulsing the brakes at T_{set} is known to avoid exciting the vehicle's natural vibration frequency; in the case of Okubo, this frequency constitutes a single frequency which is determined in advance (see Okubo, col. 5, lines 53-54), although the reference is silent as to how the natural frequency is actually determined. Thus, according to Okubo, slowing down (prolonging) applied brake pulses until they approximate T_{set} will avoid vibrating the vehicle at the predetermined natural frequency (Okubo, col. 5, lines 61-64). It can therefore be appreciated that Okubo restricts ABS operation to a slower and thus less responsive regime of operation that is predetermined and static, i.e. fixed. Operation of the ABS at frequencies higher than that allowed by maintaining T_{set} is not

possible, even where it could provide more effective braking without exciting the vehicle's natural frequency.

In sharp contrast to the method disclosed in Okubo, Applicants' claimed invention embraces a type of adaptive ABS control that is capable of avoiding excitation of the vehicle at multiple natural vehicle frequencies. Moreover, Applicants' system is, in effect, capable of compensating for a variety of changing vehicle and road conditions which can alter the vehicle's natural frequencies. For example, tire friction and road conditions can dynamically change the natural frequencies of vehicle systems and subsystems. As discussed in detail in Applicant's specification (see paragraphs 28-30), Applicants claimed control method and system adapts to changing vehicle conditions affecting natural vibration frequencies and is capable of avoiding multiple vibrational frequencies. This is accomplished by monitoring the vehicle's response to a series of braking events in which the system determines which ABS responses contribute to vibration at a natural vehicle frequency. These responses are then stored in memory on-board for future control use. When a sudden braking event occurs calling for actuation of the vehicle's ABS, the past responses are reviewed and the proposed ABS response is altered accordingly. Unlike Okubo, this alteration of the proposed ABS response may comprise delaying the ABS response or accelerating the response. In this manner, a response can be chosen that avoids one or a plurality of natural frequencies of the vehicle, while providing optimal barking results.

Claims 1-18 have been amended to highlight the distinctions discussed above, and particularly the step of accumulating or storing the response of the ABS to a series of braking events,

and then using the stored responses to alter a proposed ABS response. Similarly, newly presented method claims 19-24 recite parallel limitations. Accordingly, it is respectfully submitted that neither Okubo nor any of the other art of record show or suggest Applicants' claim invention. Accordingly, all of the claim are believed to be allowable.

Reconsideration of the rejections is respectfully requested in view of the instant amendment and foregoing comments. If the Examiner believes that direct communication with Applicants' attorneys would advance the prosecution of this case, he is invited to telephone the undersigned. Applicants believe this case is in condition for allowance and such action is courteously solicited.

Respectfully submitted,

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